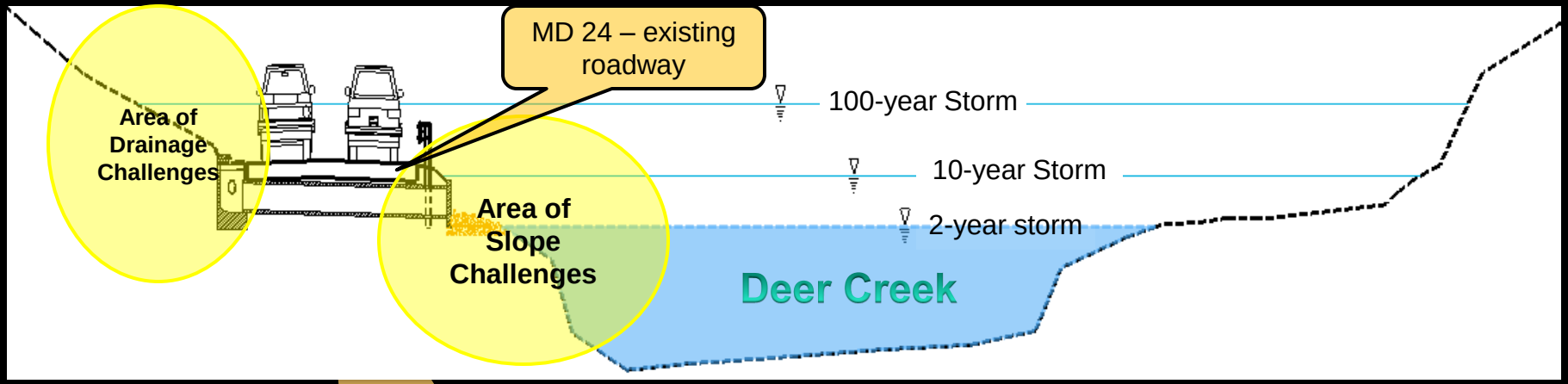
MD 24 (Rocks Road) Slope Repair Project
Priority Sections

Stream Evaluation & Slope Stabilization Techniques

Summary of Challenges



System to prevent inundation

Inlets and Pipes

Summary

Lack of sustainable highway drainage increase risks to roadway icing . Small inlet on roadway edges to convey water.

Slope stabilization techniques can use in combination to achieve the common goal.

Collective ideas will solve the challenges and provide beneficial results.

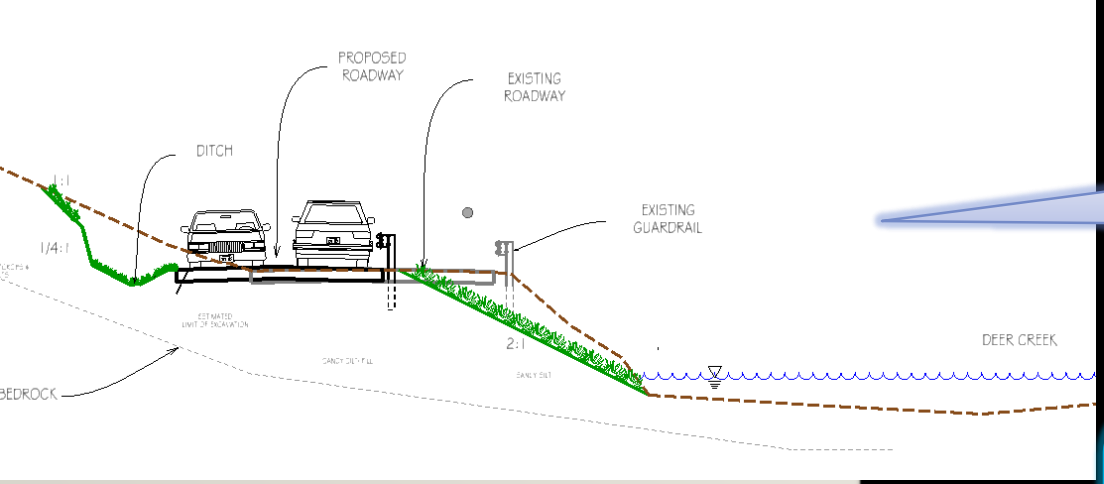
Stream Engineering & Construction

- Control Work Site
- Qualified & experienced Contractors
- Constant Oversight
- Quality Assurance
- 5-Year Monitoring

Section A – Developed Concepts

- Shift MD 24 into hillside (away from stream). 2:1 vegetated slope on streamside
- Keep MD 24 in the existing location. Imbricated wall system on streamside. Vegetated slope above wall. Riprap and biological material toe protections
- Keep MD 24 in the existing location and shift stream. 2:1 and possible benching road slope near stream. Grading on both sides of stream is required.

Section A



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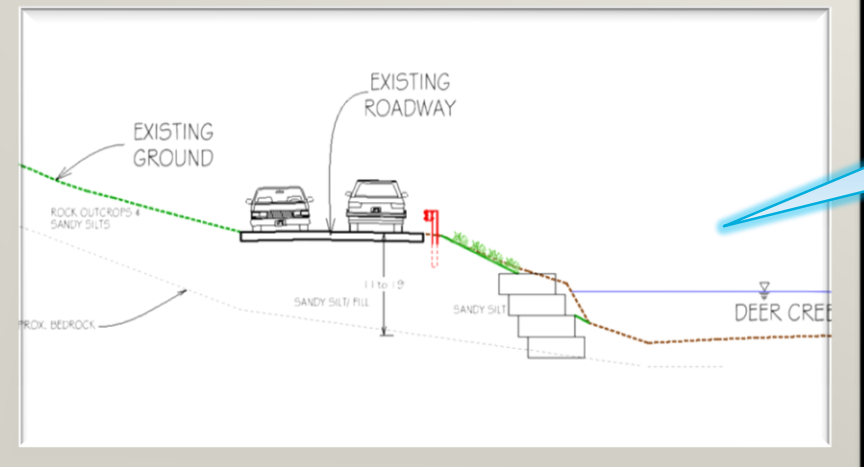

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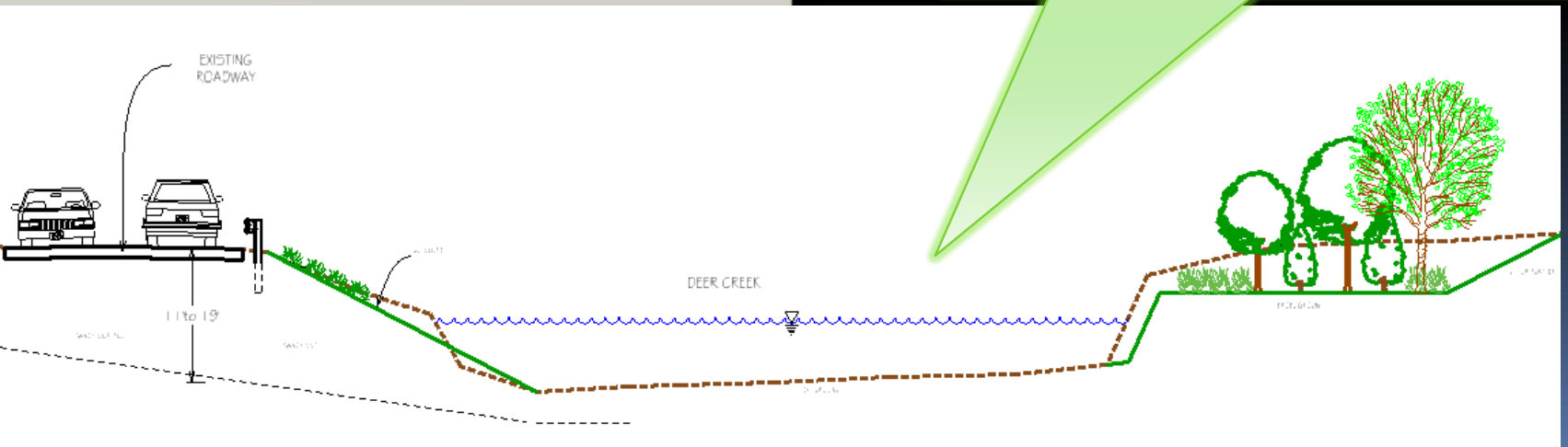

Section G – Developed Concepts

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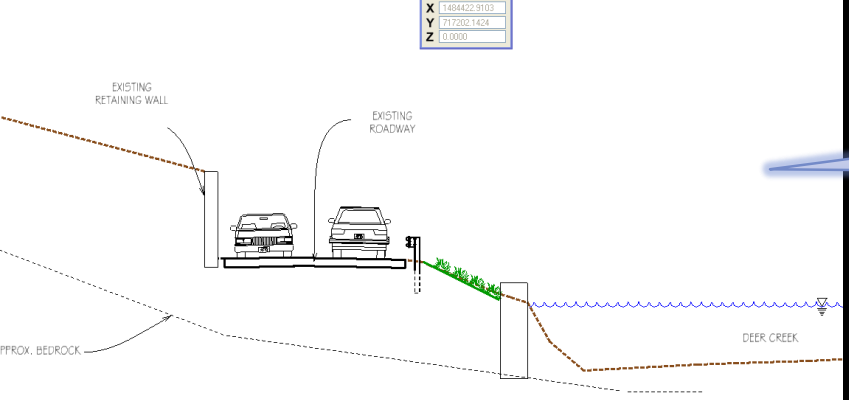

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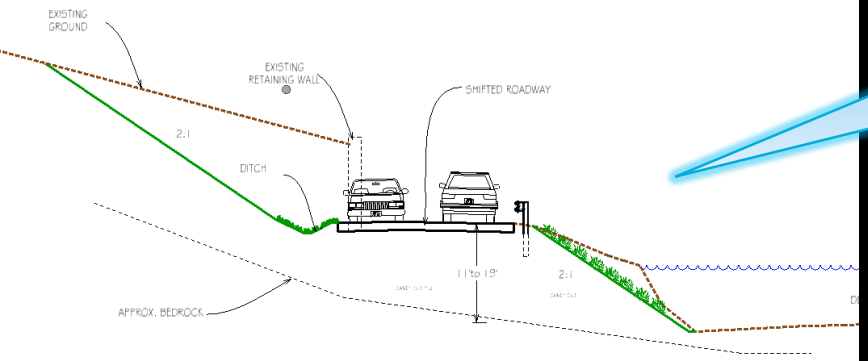

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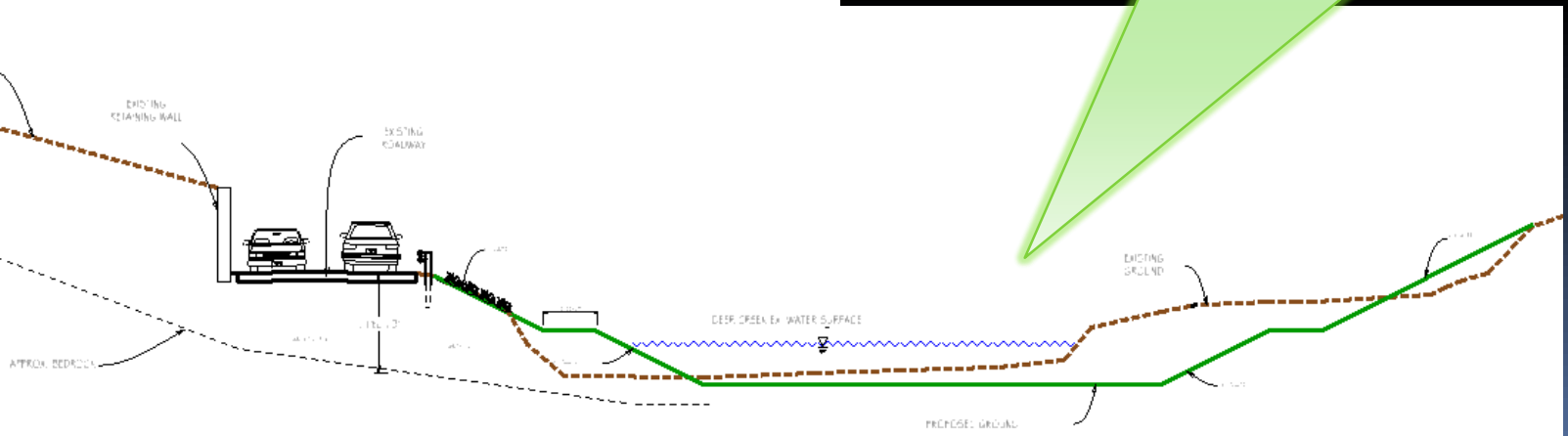


Water Quality Opportunities

Deer Creek Watershed Restoration Action Strategy - "The goal of the WRAS is to protect water quality, conserve fish and wildlife habitats, and restore those areas found to be impaired… *We envision a healthy, vibrant Deer Creek Watershed by preserving high quality streams and rivers supportive of diverse aquatic life and conserving our treasured natural resources for this and future generations. We celebrate today's rural legacy of farms, forests, historic villages, and scenic parklands.*"

Development Goal - *Utilize sustainable development and implementation approaches to manage impervious surfaces and protect water quality*….

Objective -Reduce the impact of existing development on water quality and natural resources.

Evaluate and identify stormwater management projects on public properties

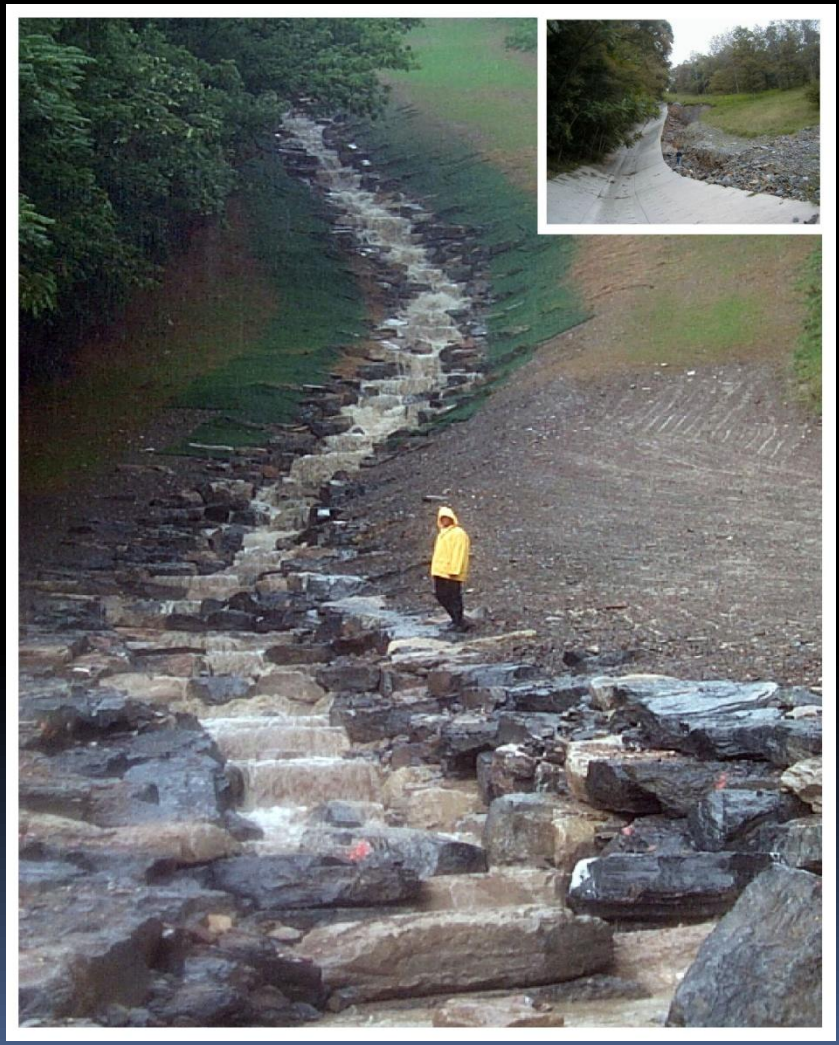
- Use sites as demonstration projects

Partnering to achieve this common goal is needed.

Example SHA Project –

Porter Run (Tributary to Braddock Run)

Western Maryland -*Concrete Channel*



Impact Description and Range		Section A No Roadway-Shift	Section A with Roadway Shift	Section A with Stream Shift	Section G No-Shift	Section G with Shift	Section G with Stream Shift
Temporary Impact-Stream	Minimum	0.19	0.29	1.31	0.09	0.56	0.84
	Maximum	0.32	0.60	1.54	0.13	1.23	1.13
Permanent Impact-Stream	Minimum	0.45	*0.10*	1.67	0.34	0.37	5.09
	Maximum	0.67	0.25	1.92	0.40	0.43	5.85
Temporary Impact - Land Side	Minimum	0.18	0.23	0.18	0.10	0.08	0.10
	Maximum	0.19	> 2.6	0.19	0.23	0.23	0.23
Permanent Impact- Land-side	Minimum	0.01	0.32	0.01	0.15	0.38	0.15
	Maximum	0.08	1.1	0.08	0.21	1.10	0.21
Total Impact	**Minimum**	**0.83**	**0.94**	**3.17**	**0.67**	**1.39**	**6.17**
	Maximum	**1.26**	**1.95**	**3.74**	**0.98**	**2.99**	**7.42**

Past
(1934)

Present
(actually a few weeks ago)

Thank You